Technical Datasheet

AME® VPRO // H/S Premium Barrier Coating products

Version_20251021

Overview

AME® VPRO // H/S are premium marine barrier coats designed with ALTA Performance Materials World-Class 100% epoxy vinyl ester technology. These additions to the AME® product line portfolio enable boat builders to achieve the performance edge of superior surface cosmetics with minimal impact on the total cost of production. AME® VPRO // H/S properties and benefits to boat builders include:

- Versatile: can be used for any marine surface: above or below the waterline
- Superior blister barrier
- Excellent surface finish profile enhancer
- Maintain integrity of laminate flexibility and other physical properties
- Easy to apply using traditional gelcoat spraying equipment
- Excellent cure properties and sag resistance
- Low emission
- Designed for barrier coat use, not weatherable as a top finish (gelcoat)

Applications

AME® VPRO // H/S are premium barrier coats for brush (H) and spray (S) applications. It is recommended to use in the marine or similar industries with demand for the best balance of structural properties and to support gelcoat surface cosmetics. The barrier coat should always be used in combination with a gelcoat on the top. ALTA Performance Materials recommends a shop temperature of 20-30 C for optimum spray application and film cure performance of the AME® VPRO barrier coats. A 9% active oxygen methyl ethyl ketone peroxide initiator is recommended at a level of 1.5-2.5%. Conventional gelcoat spray application equipment is appropriate to use with the AME® VPRO barrier coats. A spray tip size of 23 thousand is also suggested. A film thickness of 500 to 800 microns is optimum for this barrier coat.

The maximum allowable interval for applying the barrier coat over the gelcoat is governed by the application conditions, including ambient temperature, relative humidity, airflow, and film thickness. As a general guideline, overcoating can be carried out wet-on-wet, or once the gelcoat has attained a sufficiently cured state and within a maximum period of 24 hours. This interval must be confirmed through on-site testing under actual application conditions.

The values provided are indicative and may vary depending on the operational environment. It is the responsibility of the end user to verify, under their own production conditions, the adequacy of interlayer adhesion and compatibility, as well as compliance with the recommended application parameters.

Blister Resistance: Each end-user should evaluate the performance of the barrier coat in conjunction with their respective resins and gelcoat, under conditions which simulate laminate design, production procedure and anticipated field exposure before use.

Typical liquid gelcoat properties [i)]

Property	H version (brush) Typical value	S version (spray) Typical value	Unit	Method
Viscosity, Brookfield 10rpm	15000 (RV5)	7500 (RV4)	mPa.s	ISO 2555
Viscosity, cone&plate	700	300	mPa.s	ISO 2884
Styrene content	28	35	%	SFS 4864
Geltime, 2% MEKP-50	15	13	min	ASTM D2471

Typical gelcoat base resin properties [i)]

Property (postcure 16h at 40°C)	Typical value	Unit	Method
Tensile Strength	72	MPa	ISO 527
Tensile Modulus	3300	MPa	ISO 527
Elongation at Break	6,3	%	ISO 527
Flexural Strength	119	MPa	ISO 178
Heat Deflection Temperature (HDT)	100 [1)]	°C	ISO 75 (A)
Water absorption, 7 days / 24 Hours	34 / 10	mg/sample	ISO 62
Hardness	32	Barcol	ASTM D2583

1) Cured with 2% MEKP, 24h@23°C + 3h@80°C + 2h@120°C

Certificate and Approvals

The manufacturing, quality control and distribution of products, by ALTA Performance Materials, comply with ISO 9001 standard.

Packaging

Available in IBC, drums or pails.

Handling and storage

For good handling and working practices, see ALTA Performance Materials "Gelcoat Handling Guide".

The material should be stored indoors at stable temperatures below 25°C, and away from direct sunlight. Prolonged storage or storage outside of recommended conditions can influence liquid product properties like viscosity and gel time. It is also recommended to mix the product thoroughly before use. The material should be used within 3 months (H type) and 5 months (S type) from the date of manufacture.

Note: Temperature of workshop, raw materials and tools should be 18-25°C and relative humidity below 70%. A high-quality methyl ethyl ketone peroxide (MEKP) catalyst should be used between 1.5 - 2.5%.

Notice

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Since the user's product formulations, specific use applications and conditions of use are beyond the control of ALTA Performance Materials, ALTA Performance Materials makes no warranty or representation regarding the results which may be obtained by the user. It shall be the sole responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application.

ALTA Performance Materials requests that the user reads, understands, and complies with the information contained herein and the current Safety Data Sheet.

Commercial contacts by region available at: https://www.altapm.com/contact/

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i) All properties are typical values. Results may vary. Typical values are not a guaranteed analysis of any specific lot or specification.

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